



CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

September 17, 2004

H.R. 4516

Department of Energy High-End Computing Revitalization Act of 2004

*As ordered reported by the Senate Committee on Energy and Natural Resources
on September 15, 2004*

SUMMARY

H.R. 4516 would authorize the appropriation of \$165 million to the Department of Energy (DOE) over fiscal years 2005 through 2007 for certain activities related to high-end computing systems. The act would direct DOE to conduct research and development (R&D) on ways to advance the capabilities of high-end computing systems and to establish and operate leadership-class facilities, as well as to establish at least one High-End Software Development Center for the purpose of developing and supporting associated software. The act would define high-end computing systems to include those computing systems that substantially exceed the performance of systems commonly available for scientific and engineering applications. Leadership systems would be those whose performance is among the most advanced in the world.

CBO estimates that implementing H.R. 4516 would cost \$165 million over the 2005-2009 period, assuming appropriation of the authorized amounts. Enacting H.R. 4516 would have no effect on direct spending or revenues.

H.R. 4516 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would impose no costs on state, local, and tribal governments.

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary impact of H.R. 4516 is shown in the following table. For this estimate, CBO assumes that the legislation will be enacted near the start of 2005 and that the amounts specified in the act will be appropriated near the beginning of each fiscal year. We assume that outlays will follow historical patterns for DOE research and development

activities. The costs of this legislation fall within budget function 250 (general science, space, and technology).

	By Fiscal Year, in Millions of Dollars					
	2004	2005	2006	2007	2008	2009
SPENDING SUBJECT TO APPROPRIATION						
Spending Under Current Law for DOE R&D on Certain High-End Computing Systems						
Budget Authority ^a	38	0	0	0	0	0
Estimated Outlays	19	17	2	0	0	0
Proposed Changes						
Authorization Level	0	50	55	60	0	0
Estimated Outlays	0	25	50	57	30	3
Spending Under H.R. 4516						
Authorization Level ^a	38	50	55	60	0	0
Estimated Outlays	19	42	52	57	30	3
a. The 2004 level is the amount that the Office of Management and Budget estimates was appropriated for activities similar to those authorized in H.R. 4516.						

INTERGOVERNMENTAL AND PRIVATE-SECTOR IMPACT

H.R. 4516 contains no intergovernmental or private-sector mandates as defined in UMRA and would impose no costs on state, local, and tribal governments.

PREVIOUS CBO ESTIMATE

On June 24, 2004, CBO transmitted a cost estimate for H.R. 4516 as ordered reported by the House Committee on Science on June 16, 2004. The two versions of the legislation are similar. However, the Senate version would add the requirement to establish at least one High-End Software Development Center while leaving the authorized appropriation levels the same as in the House version.

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